

**METHODS FOR DIAGNOSING AND MONITORING MALIGNANCIES BY
SCREENING GENE COPY NUMBERS**

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ABSTRACT OF THE DISCLOSURE

This invention pertains to the discovery that an amplification of some genes or an increase in that gene activity and a deletion of some genes or a decrease in that gene activity is a marker for the presence of, progression of, or predisposition to, a cancer (e.g., breast cancer). Using this information, this invention provides methods of detecting a

10 predisposition to cancer in an animal. The methods involve (i) providing a biological sample from an animal (e.g. a human patient); (ii) detecting the level of the genes of the present invention within the biological sample; and (iii) comparing the level of one or more of said genes with a level of one or more of said genes in a control sample taken from a normal, cancer-free tissue.

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